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TO: Air Leaders, Permitting Writing Staff, Compliance Staff

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SUBJECT: Guidance on Construction Permit Applicability in Regard to Paint Gun Replacement¹

The replacement of equipment that emits air contaminants is examined for construction permit applicability using the same criteria as for of the installation of an entirely new source, unless the replacement is exempted from construction permitting by s. NR 406.04(6), Wis. Adm. Code. There have been several requests to define the procedures used to determine whether the replacement of paint guns meets the conditions of an exempt replacement. Section NR 406.04(6), Wis. Adm. Code exempts the replacement of air pollutant emitting equipment provided the following conditions of the exemption are met:

- (a) The replacement is for only a portion of a basic emissions unit.
- (b) Such replacement is not prohibited by a permit, plan approval or special order applicable to the source.
- (c) The essential components of the basic emissions unit are not replaced through several partial replacements within a 12-month period.

Based on these conditions, the following guidance is provided in regard to the replacement of paint guns.

The replacement of a paint gun with another which utilizes the same or a different application technology is exempt from the requirement to obtain an air permit (under the exempt replacement criteria of s. NR 406.04(6), Wis. Adm. Code,) provided the following criteria are met:

- 1) The spray gun is a component of a single applicator system. A single applicator system includes the spray gun, feed lines, pumps, barrels, etc. for one paint applicator (a single applicator system is considered a basic emission unit. A paint booth can be made up of multiple single applicator systems.).**
- 2) There is no change in application technique or a change in application technique is not prohibited by a permit, plan approval or special order. (Examples of application techniques include: high-volume, low-pressure; electrostatic; flow coating; etc.)**
- 3) All of the components of a single applicator system are not replaced over a 12 month period. (In a paint booth with multiple single applicator systems, each single applicator system is addressed individually.)**

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- 4) **The replacement will not result in any increase in operating capacity (e.g., as reflected in an increase in potential or actual emissions).**
- 5) **The change would not constitute a major modification under ch. NR 405 or ch. NR 408, Wis. Adm. Code.**

This guidance is based on the following analysis:

Definition of “Replacement”

Section NR 400.02(134), Wis. Adm. Code, defines “replacement of a source” as “the physical dismantling of a stationary source and the substitution of that source with a stationary source which is similar in operating capacity and function.”

- 1) Paint guns perform similar functions regardless of the application technique used. “Painting cars is painting cars”. Thus a high-volume, low-pressure paint gun performs a similar function to a paint gun which utilizes electrostatic techniques.
- 2) Similar in capacity is a somewhat gray area, but if no increase in potential or actual emissions results from the change in applicators, the comparison would conclude that the applicators are similar in capacity.

Therefore, if there will be no increase in emissions, the change in coating applicators meet the definition of replacement and such a change can be considered for permit exemption under the exempt replacement criteria.

Exempt Replacement Criteria

In order to qualify as an exempt replacement, all three criteria of s. NR 406.04(6), Wis. Adm. Code must be met.

Paragraph (a) “ *The replacement is for only a portion of a basic emissions unit*”, is the criterion which creates the potential for inconsistency when a paint gun replacement is examined under the Exempt Replacement provisions. According to s. NR 400.02(29), Wis. Adm. Code, “Basic emissions unit” means the smallest collection of equipment which in combination emits or is capable of emitting any air contaminant. Generally a single applicator system, whether located within a booth or outside a booth, is considered the basic emissions unit because the system could not emit without each of the components. Therefore, the paint gun is considered a portion of a basic emissions unit in this environment.

However, there are operating scenarios that can complicate the basic emission unit determination. Examples of such are the possible inclusion of conveyors, ovens and the booth itself with the applicator system(s) as a single “basic emissions unit”. Another situation which can be complicated are multiple coating processes that are part of a process line, such as a paint line which applies a primer, intermediate and top coat using three different application systems. However, even in those situations the paint guns are still considered a portion of a basic emissions unit.

Criteria (b) and (c) of the exempt replacement criteria are much more straightforward. An example which would not satisfy criterion (b), *such replacement is not prohibited by a permit, plan approval or special order applicable to the source*, would be a paint system which has a permit or order applicable to it that incorporates the coating technology as part of establishing latest available control techniques and operating practices (LACT). If the source can demonstrate that criterion (c), *the essential components of the basic emissions unit are not replaced through several partial replacements within a 12-month period*, is met through record keeping or some other means, that criterion would be considered met.